

Sulfonate held in place to ensure

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 278642	A2	19880817	EP 1988-300774	19880129
	EP 278642	A3	19891025		
	EP 278642	B1	19930811		
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
	US 4855001	A	19890808	US 1987-13057	19870210
	CA 1318058	A1	19930518	CA 1987-554414	19871215
	JP 63196677	A2	19880815	JP 1987-336698	19871229
	AT 92944	E	19930815	AT 1988-300774	19880129
	AU 8811431	A1	19880811	AU 1988-11431	19880209
	AU 608284	B2	19910328		

TI Room temperature-curable monomer-polymer-titanium dioxide structural adhesive compositions

AB A room-temp. curable, heat-resistant single package adhesive compn., useful for bonding metal surfaces, comprises (A) .gtoreq.1 olefinic monomer; (B) TaO2 and/or .gtoreq.1 **phenoxy resin** having the formula (I) (R, R1 = H, halogen, alkyl, alkoxy, cycloalkyl, alkylencycloalkyl, or aryl; x = 0-4; n = 10-250; Y = alkylene, O, thio, SO2, or carboxyl); (C) a reactive or nonreactive polymer selected from unsatd. urethane reaction product, butadiene-based rubber, polyethers, polyesters, polymer-in-monomer syrup; (D) a Bronsted acid compd.; (E) .gtoreq.1 sulfonyl halide compd.; and (F) .gtoreq.1 org. or inorg. compd. contg. .gtoreq.1 reducible transition metal. Thus, an adhesive was

prepd.

by blending Hycar 1072 rubber 5.49, hydroxyethyl methacrylate-toluene diisocyanate reaction product 14.28, PKHJ resin (II; **phenoxy resin**) 10.0, tetrahydrofurfuryl methacrylate 54.17, Cu saccharinate 0.66, p-toluenesulfonyl chloride 0.44, HS-5 (fumed silica) 0.44, hydroxyethyl methacrylate phosphate 2.52, and TiO2 12.0 parts. The adhesive showed shear strength after room temp. curing 2420 psi, after a low bake cure (at 350.degree. F) 2540 psi, after abuse bake cure (at 400.degree. F) 900 psi, and 1 mo stability at 110.degree. F satisfactory, compared with 2420, 800, 570, and satisfactory, resp., for a similar adhesive without II.

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